on the part of Agassiz of the structure which I have pointed out in my paper; and it also shows the author's interpretation of what portion of rays are seen above the spine in fig. 1. pl. 18. of the Monog. of the Old Red Fishes, which Sir P. Egerton states to be a good representation of the structure (although he does not mention that fig. 2 of the same plate represents it as perfectly heterocercal). Will Sir Philip Egerton compare Agassiz's restored figure referred to, with mine in your Journal, and say that that is right and mine wrong? or will he say that his figure and the above portion of the quotation are not as clear definitions of the heterocercal type of tail as it is possible to give? I trust these observations will show, that whatever "unfairness" may be in this discussion is not on my side; and I may assure Sir Philip Egerton, that not for all the palæontological discoveries in the world would I misrepresent the writings of any one, much less of Prof. Agassiz, for whose brilliant talents, extensive learning, and enormous service to natural science, no one can have a more profound veneration than myself.

With regard to my "using the cancelled specific appellation *latus* when speaking of the *Coccosteus decipiens*," I must beg to refer Sir Philip Egerton to the Rules for Nomenclature published by the British Association for the Advancement of Science, for the reasons which have influenced me in retaining the original name. I have the honour to remain, Gentlemen,

Your most obedient servant,

Frederick M'Coy.

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## XVI.—*Reply to* Prof. Owen's *Letter on the Ganoine of some Fish-teeth.* By Frederick M'Coy, M.G.S. & N.H.S.D. &c.

*To the Editors of the Annals of Natural History.*

Gentlemen, Cambridge, Jan. 13th, 1849.

In reference to Prof. Owen's letter in your last Number, will you favour me by the insertion of a few lines?

In your Number for August last, I published a notice of some fossil fish, and in describing the teeth used the new term "*ganoine*" to designate a peculiar modification of "*dentine*," which, from forming the hard polished surface of those teeth, had been confounded with true enamel by nearly all writers on fossil fish. To define the term, I briefly defined the tissue for which I used it, and its anatomical distinction from "enamel." Prof. Owen writes to point out that he had observed the distinction himself, as indeed every anatomist must who looks at a slice of tooth through a microscope; yet in the note to his letter he cites a

case from his 'Odontography,' where he had himself inadvertently called it "enamel" in describing a fossil tooth (*Petalodus*), although in other places he had described it as it is. Prof. Agassiz I believe in all his descriptive characters has called it "enamel," and so have most writers. The case therefore stands now as before, namely, that a peculiar modification of tissue exists in certain fish-teeth, very different from "*enamel*," yet confounded with it by many writers, frequently called "*enamel*" in the technical descriptions, and for which no other term had hitherto been proposed; my object now is to state, that in proposing the term "*ganoine*" for the sake of brevity and accuracy in the descriptions of the fossils I was engaged on, I by no means intended to impute ignorance of its structural peculiarities to any preceding writer. If I had been aware that Prof. Owen had used the word in question orally at his lectures for the polished part of ganoid scales, and that he would have preferred "*vitro-dentine*" for the dental tissue, I should of course have used it also; but as those terms have not been so published, while mine is already current, it is scarcely possible I think to make a change now without producing more confusion than the change would be worth.

I have the honour to remain, Gentlemen,
Your most obedient servant,
Frederick M'Coy.

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## XVII.—*Contributions to the Botany of South America.*

By John Miers, Esq., F.R.S., F.L.S.

### Witheringia.

The following observations will I hope serve to throw some light upon this hitherto obscure genus. It always appeared to me that the *Witheringia picta*, as figured by Martius (Nov. Gen. tab. 227), must either form the type of a very distinct group, or be considered as a very good illustration of that genus, for which reason I refrained from publishing what I had long ago observed on the subject, until I could satisfy myself of the absolute character obscurely indicated by L'Heritier, in regard to his typical species *W. solanacea* (Sert. Angl. 33. tab. 1). Under this uncertainty (in a note, Lond. Journ. Bot. iv. 353) I alluded to the unsuccessful search I had everywhere made for some specimen, or better details, of the plant in question, so as to be able to comprehend the limits and features of the generic character of *Witheringia*, and I expressed my regret that the original type no longer existed in L'Heritier's herbarium in the British Museum, as that would at once have cleared up this ambiguity. Dr.